## REMARKS

Favorable consideration and allowance are respectfully requested for claims 1, 2, 5, 6, and 8 – 19 in view of the foregoing amendments and following remarks.

New claim 19 specifies that the depletion in phenolic urine contents is obtained by solid-phase extraction on a non-ionic semipolar adsorption resin or on a hydrophobized silica gel. This claim is supported in the specification at least by paragraph [0030] of the application as published.

The rejection of claims 1, 2 and 6 under 35 U.S.C. § 112, second paragraph, as indefinite, is respectfully traversed.

The term "natural mixture" in claims 1, 2 and 6 appears in the expression "natural mixture of conjugated equine estrogens". The specification of the present application provides clear meaning for this phrase, for instance in paragraphs [0003] and [0005]. In particular, the specification indicates that "natural mixtures of conjugated estrogens such as are found in the urine of pregnant mares, hereafter referred to as natural mixtures of conjugated equine estrogens" in paragraph [0003], and "[t]he PMU contains a natural mixture of estrogens which is largely present in conjugated form, e.g. as sulfuric acid semi-ester sodium salt (abbreviated hereafter as "sulfate salt")" in paragraph [0005]. This clearly indicates that the mixtures of conjugated equine estrogens obtained by the method of the present invention are simply obtained from a natural educt, the pregnant mares' urine and are not changed by, e.g. adding synthetic or additional amounts of estrogens.

Given the disclosure, a person of skill in the art could readily determine the meaning of this claim language and accordingly, the scope of the claims is not indeterminate.

The Office Action also queries the phrase "depleted in phenolic urine contents". As amended, the claims recite depleted in phenolic urine contents comprising phenol, cresol and dihydro-3,4-bis[(3-hydroxyphenyl)methyl]-2(3H)-furanone, and obtained by solid-phase or liquid-liquid extraction."

In addition, the claims clarify that the educt was obtained by solid-phase or liquid-liquid extraction (see paragraph [0030] of the description). In any event, there should not be any question as to the degree of depletion of phenolic urine contents, rather, one of skill in the art need only know that there was any depletion of phenolic urine content. If such instance, the solution is "depleted in phenolic urine contents", and the limitation of the claim language is met.

For purposes of definiteness, the relevant question is whether one of skill in the art could understand the scope of the claim. The MPEP, at § 2173.02, states that:

> In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000).

In the present case, that test is clearly met, because one of skill in the art would readily understand the scope of the claims. Therefore, one of skill in the art could readily determine whether or not some activity constitutes infringement of these claims.

Accordingly, the claims clearly define the subject matter of the present invention. For these reasons, the claims are believed to be definite, and reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 1 – 6 under 35 U.S.C. § 102(b) over Turner *et al.* (2,519,516), as supported by MSDS and ICSC and the Merck Index, is respectfully traversed.

As amended, claim 1 (and therefore dependent claims 2, 5 and 6) recite that the organic solvent extracting agent is selected from the group consisting of straight-chained, branched or cyclic $C_4$-$C_{10}$ alcohols, $C_2$-$C_{10}$ esterified acids, $C_3$-$C_{10}$ aldehydes, $C_4$-$C_{10}$ ketones, $C_2$-$C_{10}$ ethers, $C_3$-$C_6$ nitriles and $C_1$-$C_3$

haloalkanes and mixtures of the aforementioned solvents. This language previously appeared in claim 7, which was not included in this rejection. The amendment is believed to distinguish the reference or combination thereof. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 7 – 12 and 15 – 18 under 35 U.S.C. § 103(a) over Turner et al. (2,519,516) in view of Wang et al. (WO 01/27134) as supported by Klaassen et al. (Casarett and Doull's Toxicology, April 2001) and Hurst et al. (Methods of Analysis for Functional Foods and Nutraceuticals, 2002) is respectfully traversed.

In Turner *et al.* the concentrated extract - before extracting/removing the free estrogenic material with *e.g.* benzene (step F) - is diluted with water and preferably saturated with a neutral salt (step E) [column 4, lines 40 -42]. This is also described in Example 1 "followed by saturation of the aqueous solution with sodium chloride." There is no example in Turner *et al.* that does not provide for the addition of salt in this kind of extraction step. Similarly, Wang uses ethyl acetate for the extraction of conjugated estrogens in the presence of salts.

The presently claimed methods, on the other hand, do not require the addition of salt. The skilled artisan would not have reached the present invention, as the teachings of Turner *et al.* and Wang would always result in a method including the step of adding salt.

Further, the aim of the present invention is neither the separate recovery of free estrogenic material nor the extraction of conjugated estrogens from PMU by liquid-liquid extraction. Instead, the claims are directed to the removal of undesired non-conjugated lipophilic compounds, in particular those derived from the ingested plants (e.g. non-conjugated flavonoids, non-conjugated isoflavonoids, and non-conjugated norisoprenoids - often also called "phytoestrogens") and therefore provides an additional purification step for extracts already enriched with regard to the conjugated estrogen fraction. The present amendment of claim 1 reflects this particular feature.

A person of skill in the art would not be motivated to try to use the teachings of Wang *et al.* to look for ethyl acetate as a solvent substituting the benzene from Turner *et al.* to remove the non-conjugated lipophilic compounds, in particular the plant derived ones, since the Wang disclosure only deals with the recovery of the conjugated estrogens from pregnant mares' urine and uses the ethyl acetate in an opposite reaction. Further, there is nothing to provide one of skill in the art with any expectation of success in achieving desirable results with the claimed method. Starting from Turner and Wang, the person of skill in the art would not be motivated to omit the addition of salt to achieve the desired result (the removal (extraction) of the non-conjugated lipophilic compounds from the extract containing the conjugated estrogens) with ethyl acetate as a solvent.

With regard to claims 11 -12 (limitations towards the pH value) and claims 15 -18 (limitations towards the volume ratio), the teachings of Wang are directed to a different process (i.e., the extraction of conjugated estrogens from PMU with ethyl acetate after addition of salt) and cannot simply be imposed on a different process (i.e., the removal (extraction) of non-conjugated phytoestrogens from PMU with ethyl acetate without addition of salt) as provided in the present claims.

Thus, the proposed combination of references fails to teach or suggest the claimed method and reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 13 and 14 under 35 U.S.C. § 103(a) over Turner et al. (2,519,516) in view of Wang et al. (WO 01/27134) as supported by Klaassen et al. (Casarett and Doull's Toxicology, April 2001) and Hurst et al. (Methods of Analysis for Functional Foods and Nutraceuticals, 2002) and further in view of

Fishman et al. (Steroids, 5(3) 1965) as supported by Nendza (Structure-Activity Relationships in Environmental Sciences, 1998) is respectfully traversed.

Claims 13 and 14 depend from claim 12. As explained above, the combination of Turner, Wang, Klassen and Hurst fail to obviate claim 12. The additionally cited references, Fishman and Nendza do not make up for the deficiencies of the previously-cited four references. Further, there is nothing that suggests or would cause one of skill in the art any motivation to try to combine these six references as suggested in the Office Action. Accordingly, the obviousness rejection cannot be properly maintained and reconsideration and withdrawal thereof are respectfully requested.

## CONCLUSION

In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket No. 029300.52141US).

Respectfully submitted,

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